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(54) Improvements in reversing mirror  
for road vehicles

(57) A rear view mirror 2, for road  
vehicles positioned at the rear corner of  
the vehicle so as to enable the driver to  
see the rear of the vehicle and the area  
immediately behind it when reversing  
but being folded neatly to the side of  
the vehicle during normal running con-  
ditions.

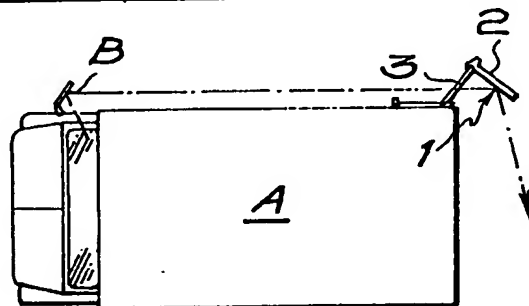


FIG. 1

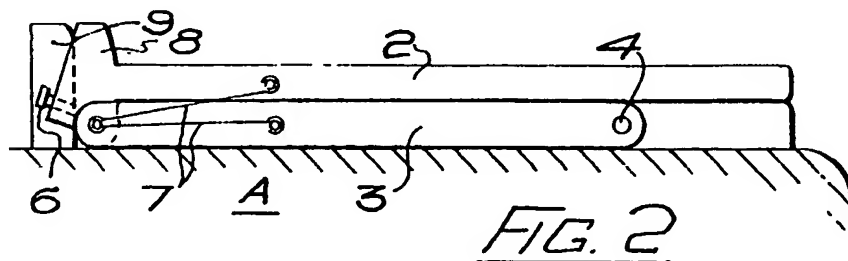
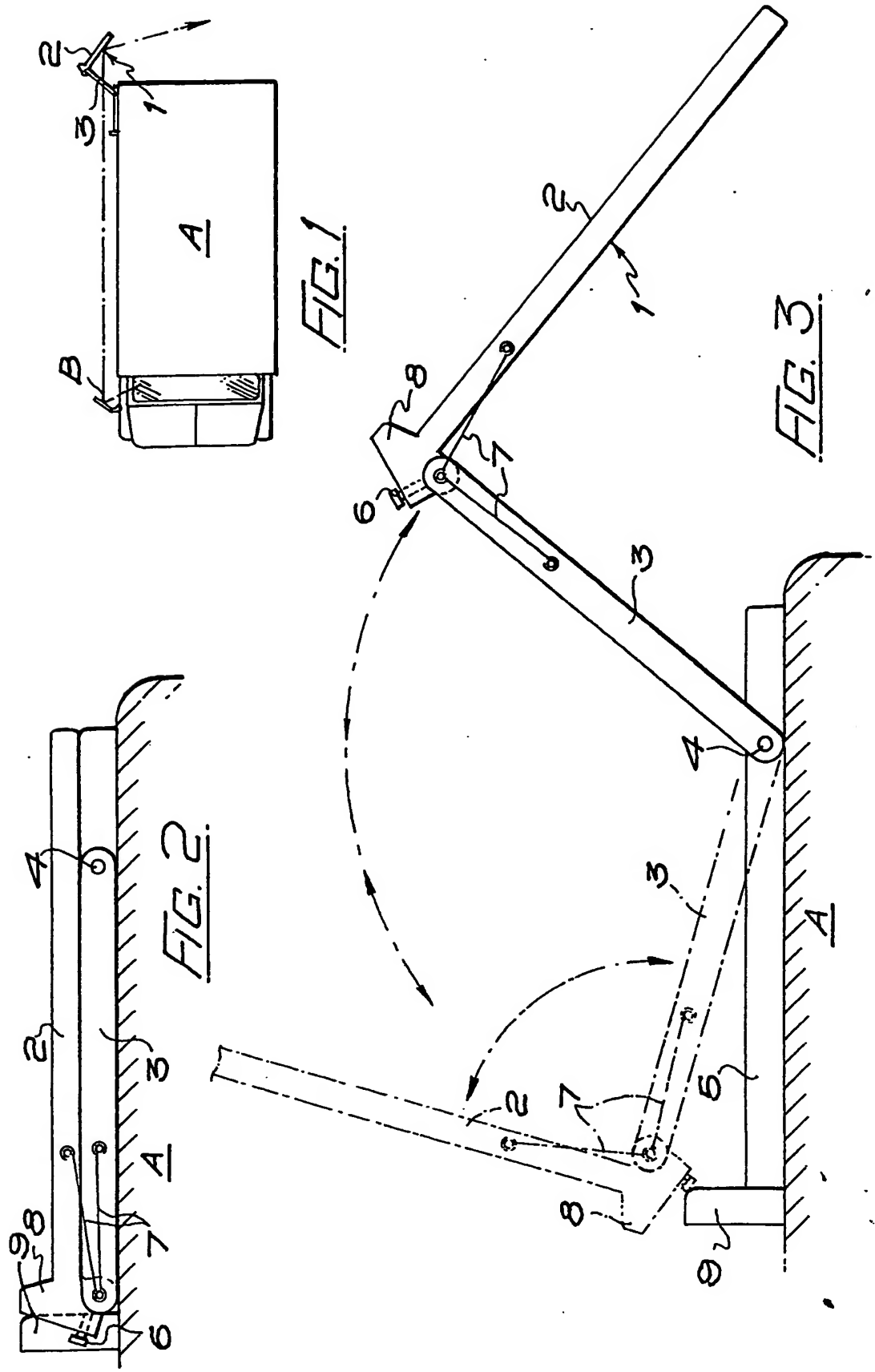


FIG. 2

The drawings originally filed were informal and the print here reproduced is taken from a later filed formal copy.

GB 2 085 382 A



## SPECIFICATION

## Improvements in reversing mirror for road vehicles

5 The invention relates to a mirror arrangement for road vehicles enabling a driver to see transversely behind the vehicle while reversing.

At present, reversing is a hazardous manoeuvre for many road vehicles e.g. vans, lorries as the area immediately behind the vehicle is often not visible with the usual rear-view or wing-mirrors. Often there are no rear windows, or they are too high, or obscured by a load or otherwise so that the usual type of rear-view mirror is rendered useless. The driver's lack of visibility has led to damage to property and injury to people.

The object of the present invention is to provide a means by which the rear of the vehicle and its immediate vicinity are visible to the driver while he is reversing the vehicle and thus to obviate the dangers presently involved in reversing.

According to the invention a mirror is provided at the rear corner of the vehicle on the driver's side, the mirror being positioned to enable the driver to see the rear of the vehicle and the area immediately there behind and adapted to be folded to the side of the vehicle during normal running conditions.

The invention will be described with reference to the accompanying drawings:-

30 *Figure 1* is a diagrammatic plan of a vehicle with a mirror mounted thereon.

*Figure 2* is a plan of the mirror when not in use;

*Figure 3* is a similar view of the mirror in the operative position.

35 A mirror 1 preferably about 18 inches (45cm) long and 12 inches (30cm) wide is mounted to project from the rear corner of a vehicle A to enable the driver on reversing to see that the coast is clear.

The mirror 1 is mounted in a frame 2 to which is pivoted a pair of arms 3 the opposite ends of which are mounted on a spindle 4 supported in a bracket 5 affixed to the side of the vehicle A. The spindle 4 is rotated by an electric pneumatic or hydraulic motor (not shown) controlled by a switch in the vehicle cab.

45 The frame 2 is provided with an adjusting screen 6 for setting the mirror at the correct angle for viewing either in a mirror B or directly from the cab window and a stop is provided for limiting the rearward movement of the arms 3.

50 A spring 7 is provided for pivoting the arms 3 and arms 8 away from the frame 2 as the mirror is moved into the operative position.

During normal running conditions the mirror 1 and frame 2 are folded away into a slotted panel enclosing the bracket 5 mounted on the side of the vehicle A. The bracket 5 and panel may protrude from the vehicle side by approximately 1 inch (2.5cm). The frames 2 and arms 3 lie flat against the side of the vehicle and the mirror 1 lies with its silvered face directed towards the vehicle side. The mirror face 1 is thus protected from mechanical or weather damage. There may also be protective or cushioning material such as foam rubber attached to the side of the vehicle and/or parts of the arms  
65 against which the mirror face lies in the folded

position, and the mirror may have a plastics surround to facilitate sealing against the vehicle side.

70 The frame 2 is formed with a heel 8 adapted to engage a projection 9 extending outwardly from the bracket 5 when in the mirror 1 is in the in operation position.

When the driver of the vehicle wishes to reverse his vehicle, he operates the spindle 4 by which the mirror is made to move into the open position. The said means may be pneumatic or hydraulic cylinders or an electrical solenoid or motor, any of which swivel the spindle 4 so that the pivot points between arms and mirror separate under the action of the spring 7 and the arms move out to a position  
80 predetermined by a stop which may be at an angle of approximately 50° to the side of the van.

The mirror 1 and frame 2 are moved from the operative position shown in full lines in Figure 3 to the inoperative position shown in Figure 2 by rotation of the spindle 4 and when the heel 8 engages the projecting 9 the arms 3 are pivoted from the open position shown in long and short dots in Figure 3 to the closed position shown in Figure 2 against the action of the spring 7.

90 Once the arms 3 and the mirror frame 2 are disengaged from the projection 9, the mirror swings out to the appropriate angle, which may be 90° to 100°, from the arms 3.

When the driver has completed the reversing manoeuvre, aided by his view of the rear of the vehicle through the mirror 1, he operates the cylinder or motor in the reverse direction to rotate the spindle 4 to bring the arms 3 back into a position flush with the vehicle side.

100 As the arms approach the vehicle side, the heel 8 comes into contact with the projection 9 on the vehicle side and the mirror is thus swung towards the arms 3 and folds flat against the vehicle side, and spring 7 is once again tensioned.

## 105 CLAIMS

1. A mirror mounted on the rear corner of a vehicle to enable the driver to see transversely across the rear of the vehicle comprising a bracket mounted on the side of a vehicle adjacent the rear corner, an arm(s) mounted on a driven spindle a mirror frame pivoted on the opposite end of the arm(s), a heel on the mirror frame to engage a projection on the bracket to close the mirror frame against the action of a spring so that the mirror frame and arm(s) be parallel along the vehicle side when the mirror is in the inoperative position.

2. A mirror as in claim 1, in which the mirror frame relatively to the arm(s) is adjustable.

3. A mirror as in claims 1 or 2 in which the spring separates the mirror frame from the arm(s) when the arm(s) are moved by the spindle from the inoperative position.

125 4. A mirror as in claims 1 - 3 in which the bracket is enclosed by a slotted panel to protect the mirror from the weather.

5. A mirror mounted on the rear corner of a vehicle substantially as described with reference to the accompanying drawings.

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